

TABLE 1. SUMMARY OF DIFFERENCES BETWEEN ALTERNATIVES A AND B

<i>Alternative A (Current Management)</i>	<i>Alternative B (Proposed Action)</i>
Habitat Quantity	
86 acres of rotational managed wetland (moist-soil) units 160 total acres of kalo farms (9 parties), including dikes and ditches: <ul style="list-style-type: none"> • 123 acres of allocated lo‘i kalo • 13 acres of unallocated lo‘i kalo 	Provide a mosaic of 209–249 acres of wetland habitat (rotational managed wetlands and lo‘i kalo). The upper bound of acreage includes unallocated lo‘i kalo and enhanced or restored seasonal/rotational wetlands. Assignment of acreage among rotational managed wetland units, lo‘i kalo (via cooperative agriculture agreement [CAA]), fallow, or upland habitat (e.g., koloa nesting habitat) would be based on a decision flowchart and reevaluated periodically using an adaptive management framework
76 total acres of in-use dikes and ditches	76–85 acres of dikes and ditches (including within unallocated kalo farming areas and associated with proposed wetland restoration areas) managed under BMPs to improve waterbird habitat and water quality
	Enhance or restore 3–18 acres of seasonal/rotational wetlands
	Use mowing and livestock grazing to enhance and manage 14–24 acres of riparian habitat for nēnē breeding and foraging Develop prescribed grazing and monitoring plan
	Enhance and manage 21 acres of upland habitat for nesting koloa maoli
Reduce hau by 2–5 acres/year in priority areas	Same as current
Permits for Cooperative Kalo Farming; Residences and Farm Storage Areas	
Currently permitted annually under general SUP but transition to CAAs, awarded through competitive application	Implement CAAs, awarded through competitive application, with terms up to five years subject to regular ongoing compliance review

<i>Alternative A (Current Management)</i>	<i>Alternative B (Proposed Action)</i>
Develop cost-sharing program through CAA Current SUP fee of \$25/cultivated acre/year (does not apply to other farm use areas used for houses, storage, etc.) may or may not be waived or increased	Same as current
If permittee has an existing residence on the Refuge, then only immediate family (legal parents, spouse, children) may reside in the residence	Same as current, but also: <ul style="list-style-type: none"> • No new farm residences are authorized on Refuge property • At least one permit holder must live in the residence. • Size of use area by permittee would be delimited in CAA/SUP
Use of Refuge lands for permittee-owned residences, storage sheds, and other facilities would no longer be allowed when associated kalo farming CAAs and SUPs are terminated	Same as current
	Develop compliance monitoring system that is reviewed and updated annually
Kalo Farming Stipulations	
Minimum requirement of 30-day wet fallow followed by optional dry fallow <180 days total	Same as current
	Enhance vegetation structure of lo'i habitat (all stages) by maintaining either: <ul style="list-style-type: none"> • $\geq 10\%$ cover of beneficial non-kalo emergent plants in understory within each lo'i; • $\geq 20\%$ cover of beneficial non-kalo emergent plants in understory on $\geq 50\%$ of lo'i; or • $\geq 10\%$ of total lo'i acreage in vegetated wet fallow to promote growth of non-kalo emergent plants

<i>Alternative A (Current Management)</i>	<i>Alternative B (Proposed Action)</i>
<p>Permittees are to report threatened or endangered waterbird nests within 48 hours of discovery</p> <p>3-foot radius buffer around threatened or endangered waterbird nests in lo‘i kalo</p>	<p>Permittees are to report threatened or endangered waterbird nests within 24 hours of discovery</p> <p>Minimum 6-foot radius buffer around threatened or endangered waterbird nests in lo‘i kalo. Permittees are to coordinate with Refuge staff to minimize impacts or take of birds by implementing additional protective measures as needed, such as delaying harvest in areas where nests are known to occur until the young birds fledge or leave the lo‘i on their own accord</p> <p>Initiate a study of the relative effectiveness of different size nest buffers on nest and fledging success of threatened and endangered waterbirds within three years; modify buffer requirements and compatibility stipulations if necessary</p>
	Permittees are required to maintain vegetation 4–6 inches in height on $\geq 75\%$ of dike tops in each permit area using mowing or brush-cutting
<p>Permittees provide to the Refuge logs of:</p> <ul style="list-style-type: none"> • Specific dates and locations of wet and dry fallow periods • Herbicide and fertilizer application dates, types, and amounts • Ditch cleaning and road maintenance or repair 	Same as current
	Each permittee must cooperate with the Refuge on developing fertilizer and herbicide management plans
Work with NRCS, farmers, and other partners to develop kalo farming BMPs, for improving water quality and flow and stemming avian botulism mortalities	Same as current

<i>Alternative A (Current Management)</i>	<i>Alternative B (Proposed Action)</i>
<p>Permittees are to report sick/dead birds within 24 hours of discovery</p> <p>Permittees are encouraged to participate in relevant aspects of the Avian Botulism Prevention and Response Protocol as part of their SUP. If a given kalo patch is identified as an avian botulism hotspot, then work with Refuge staff to change environmental conditions.</p>	<p>Same as current but also: Permittees will be required to participate in relevant aspects of the Avian Botulism Prevention and Response Protocol as part of their CAA and SUP.</p> <p>In avian botulism prone areas, implement BMPs which include reconfiguring pipelines to remove all flow-through drains and draining, harvesting, and dry fallowing lo'i for ≥ 30 days, pending Refuge request</p>
	Thoroughly drain and aerate every kalo patch after the 30-day wet fallow period prior to replanting
Regular coordination meetings (e.g., avian botulism-related) and cooperation on maintaining infrastructure; IPM; monitoring and research	Same as current
	Within three years of WMWCP completion, develop incentive mechanisms for the use of more sustainable and wildlife-friendly farming practices (e.g., maintaining larger nest buffers and use of ≥ 60 -day vegetated wet-fallow period followed by a 2–6-month dry fallow period after tilling organic matter into soil)